

REMARKS

Applicants have amended claims 1, 11, 20, 23, and 26. Applicants have canceled claims 2, 4, 13, and 29. No new matter has been added by this amendment.

Claim Rejections – 35 U.S.C. § 102(a)

The Examiner has rejected claims 1, 2, 8, 9, and 11 under 35 U.S.C. §102(b) as being anticipated by Young, III (U.S. Patent 5,694,467). Applicants respectfully submit that claims 1, 2, 8, 9, and 11 are not anticipated by Young because the reference does not teach every element recited in these claims.

With respect to independent claim 1, Applicants claim: “An apparatus comprising: a mixer coupled to an external audio source to receive an external audio signal; a user audio preference interface (UAPI) coupled to the mixer to receive an audio preference from a user, the audio preference being used to determine a specified relationship; the mixer coupled to an ambient audio source to receive an ambient audio signal; the mixer to mix the external audio signal and the ambient audio signal according to a the specified relationship; and a speaker coupled to the mixer to emit the external audio signal and the ambient audio signal into an ear canal of a the user after the external audio signal and the ambient audio signal have been mixed by the mixer, wherein the ambient audio source, the mixer, and the speaker are integrated in a headset.” Thus, in Claim 1 the headset is comprised of at least a mixer, ambient audio source, and speaker. Furthermore, an audio preference is determined by the user, and that the mixer mixes the audio signals according to the relationship specified by the user.

Young discloses an integrated sound/telephone headset system. The system comprises several separate components, including: a telephonic instrument or telephone, a control box, a music source, and a headset, all of which are interconnected. (Col. 2, lines 44-49; Fig. 1; Fig. 2) The system disclosed by Young contains a mixer (22) located within a control box (20). The control box (20) is located external to the headset (40) and is connected to the headset via three connections, an audio line (47), a mic feed (48), and a position signal line (49). (Col. 3, lines 50-55; Fig. 1; Fig. 2)

Young does not teach or suggest that the ambient audio source, the mixer, and the speaker may be integrated in a headset. Rather, Young teaches a mixer which is located external to the headset, in a separate control box. Moreover, Young does not teach a user audio preference interface coupled to the mixer to receive an audio preference from the user. Therefore, Applicants respectfully submit that Young does not anticipate or suggest all elements of independent claim 1.

Claims 8 and 9 are dependent upon claim 1. Thus, for at least the same reasons advanced above with respect to independent claim 1, Applicants respectfully submit that Young does not anticipate or suggest all elements of dependent claims 8 and 9.

With respect to independent claim 11, the cited references fail to teach Applicants invention for the same reasons set forth regarding independent claim 1. Again, Young does not teach that the mixer is located within in a headset and does not teach that the specified relationship is predetermined by a preference input by a user. Thus, Applicants respectfully submit that Young does not anticipate all elements of independent claim 11.

Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 3, 5-7, 10, 12, and 14-28 as unpatentable under 35 U.S.C. §103(a). Applicants respectfully submit that these claims are not rendered obvious by the combinations of references set forth by the Examiner because the references do not teach or suggest every element of these claims.

The Examiner rejected claims 3 and 13 as being unpatentable over Young in view of Rast (U.S. Patent Application 2001/0046304). Claim 3 is dependent upon independent claim 1. Claim 13 is dependent upon independent claim 11. As set forth above, Applicants teach that a headset is comprised of at least a mixer, ambient audio source, and speaker. Young teaches that the mixer is located external to the headset. Rast teaches that an ambient signal from a microphone is compared with a sound profile stored in memory using a DSP/microcontroller to determine which audio signal will be provided to a user. (page 5, paragraph 0051) Rast discloses a user control (button 20d) which allows the user to toggle between listening to audio channels and listening to environmental acoustics. (Paragraph 0055) Rast does not teach that a user specifies a relationship to be used when mixing the audio signals. Neither Young nor Rast disclose a user audio preference interface coupled to a mixer in a headset to receive an audio preference from the user. Thus, Applicants respectfully submit that claims 3 and 13 are not rendered obvious by Young and Rast, independently or in combination, because the references do not teach or suggest every element of these claims.

The Examiner has rejected claim 4 as being unpatentable over Young in view of Blum (WO 99/53612). Applicants have canceled claim 4 and added the limitation of claim 4 to independent claim 1, and thus will address this rejection with respect to

independent claim 1. As set forth above, Applicants teach that a headset is comprised of at least a mixer, ambient audio source, and speaker. Young teaches that the mixer is located external to the headset. Blum teaches a user adjustable volume control, wherein two signals, both of which are derived from the same audio source (Receiver 7) are summed by a unity gain summing amplifier 12. (Page 19, line 20; Fig. 2) Neither Young nor Blum disclose a headset which is comprised of at least a mixer, an ambient audio source, and a speaker. Thus, Applicants respectfully submit that claim 4 is not rendered obvious by Young and Blum, independently or in combination, because the references do not teach or suggest every element of this claim.

The Examiner rejected claims 5, 14, and 15 as being unpatentable over Young in view of Soli et al. (U.S. Patent 6,563,931). Claim 5 is dependent upon independent claim 1. Claims 14 and 15 are dependent upon independent claim 11. As set forth above, Applicants teach that a headset is comprised of at least a mixer, ambient audio source, and speaker. Young teaches that the mixer is located external to the headset. Soli discloses an auditory prosthesis and a method comprising a filter to remove an unwanted component of an ambient auditory signal. Soli does not teach a mixer. Neither Young nor Soli disclose a headset which is comprised of at least a mixer, an ambient audio source, and a speaker. Thus, Applicants respectfully submit that claims 5, 14, and 15 are not rendered obvious by Young and Soli, independently or in combination, because the references do not teach or suggest every element of these claims.

The Examiner rejected claims 6 and 16-19 as being unpatentable over Young in view of Neoh (U.S. Patent 6,668,204). Claim 6 is dependent upon independent claim 1. Claims 16-19 are dependent upon independent claim 11. As set forth above, Applicants

teach that a headset is comprised of at least a mixer, ambient audio source, and speaker. Young teaches that the mixer is located external to the headset. Neoh discloses a device to improve the listening experience for a user of headphones or hearing aids using individualized compensation coefficients in conjunction with signal processing circuits, such as filters. (Col. 4, lines 50-59) Neoh does not teach a mixer. Neither Young nor Neoh disclose a headset which is comprised of at least a mixer, an ambient audio source, and a speaker. Thus, Applicants respectfully submit that claims 6 and 16-19 are not rendered obvious by Young and Neoh, independently or in combination, because the references do not teach or suggest every element of these claims.

The Examiner rejected claim 7 as being unpatentable over Young in view of Sugihara (U.S. Patent 6,218,971). Claim 7 is dependent upon independent claim 1. As set forth above, Applicants teach that a headset is comprised of at least a mixer, ambient audio source, and speaker. Young teaches that the mixer is located external to the headset. Sugihara discloses a digital mixer suitable for single use or in a cascade configuration with other digital mixers of similar configurations. (Col. 1, lines 55-58) Sugihara does not teach that the mixer is integrated into a headset. Neither Young nor Sugihara disclose a headset which is comprised of at least a mixer, an ambient audio source, and a speaker. Thus, Applicants respectfully submit that claim 7 is not rendered obvious by Young and Sugihara, independently or in combination, because the reference does not teach or suggest every element of the claim.

The Examiner rejected claim 10 as being unpatentable over Young in view of Prince (U.S. Patent 6,360,203). Claim 10 is dependent upon independent claim 1. As set forth above, Applicants teach that headset is comprised of at least a mixer, ambient audio

source, and speaker. Young teaches that the mixer is located external to the headset. Prince discloses a dynamic voice operated filtering system for aircraft applications. Prince does not teach a mixer, nor does Prince teach a mixer which is integrated into a headset. The relevant circuitry of Prince is located external to the user headphone, such as in an intercom system. (Col. 3, lines 14-30; Fig. 1; Fig. 4) Neither Young nor Prince disclose a headset which is comprised of at least a mixer, an ambient audio source, and a speaker. Thus, Applicants respectfully submit that claim 10 is not rendered obvious by Young and Prince, independently or in combination, because the reference does not teach or suggest every element of the claim.

The Examiner rejected claims 20-22, 23, 24-26, 27, and 29 as being unpatentable over Rast (U.S. Patent Application 2001/0046304), and claim 28 as being unpatentable over Rast in view of Soli et al. (U.S. Patent 6,563,931). Applicants respectfully submit that these claims are not rendered obvious by the combinations of references set forth above because the references do not teach or suggest every element of these claims.

With respect to independent claims 20, 23, and 26, Applicants teach that the mixing occurs within a headset and that the mixer mixes the audio signals according to a relationship specified by the user.

Rast discloses a user control (button 20d) which allows the wearer to toggle from listening to audio channels and listening to environmental acoustics. (Paragraph 0055) Rast does not teach that a user specifies a relationship to be used when mixing the audio signals. Button 20d is merely a switch which allows the user toggle from one audio source to another based on user input. Thus, Applicants respectfully submit that

independent claims 20, 23, and 26 are not rendered obvious by Rast, because the reference does not teach or suggest every element of these claims.

Claims 21, 22, 24, 25, and 27 are dependent upon claims 20, 23, and 26, respectively. Thus, for the same reasons as advanced above with respect to independent claims 20, 23, and 26, Applicants respectfully submit that Rast does not teach or suggest every element of these claims.

Claim 28 is dependent upon claim 26. As set forth above, Applicants teach that the mixer mixes the audio signals according to a relationship specified by the user. Soli discloses an auditory prosthesis and a method comprising a filter to remove an unwanted component of an ambient auditory signal. Soli does not teach mixing the audio signals according to a relationship specified by the user. Neither Rast nor Soli teach a mixer which mixes the audio signals according to a relationship specified by the user. Thus, Applicants respectfully submit that claim 28 is not rendered obvious by Rast and Soli, independently or in combination, because the references do not teach or suggest every element of these claims.

Applicants respectfully request the removal of the 35 U.S.C. 102(a) rejection of claims 1, 8, 9 and 11, and the 35 U.S.C. 103(a) rejection of claims 3, 5-7, 10, 12, and 14-28, and requests allowance of these claims.

CONCLUSION


Applicants submit that all pending claims are allowable over the cited references. If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact Thomas Webster at (408) 720-8300.

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Respectfully submitted,

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